Implementation of a Standardized Clinical Assessment and Management Plan Improves Neonatal Outcomes in Prenatally Suspected Congenital Heart Disease

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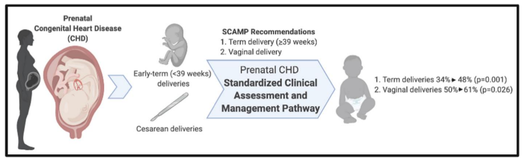
Background



Objective

This study aimed to evaluate the impact of the fetal CHD SCAMP on neonatal outcomes, specifically focusing on survival at discharge and survival rates across cardiac classifications in pregnancies complicated by fetal CHD.

Study Design

- Neonatal data from historical and intervention cohorts before and after SCAMP implementation were analyzed.
- Neonates with complete data on birth mode, birthweight, and survival at discharge were included.
- Primary outcome: Survival at discharge
- Secondary outcomes: survival differences based on birth mode and survival by cardiac classification.
- Statistical analysis: t-tests for continuous variables and chi-square tests for categorical variables.

Results

- A total of 414 pregnancies were included in the study, comprising 167 historical pregnancies and 247 intervention cohort pregnancies.
- Mean birthweight increased from 2808g in the historical cohort to 2967g in the post-SCAMP intervention cohort (p=0.02).
- The overall survival rate to discharge was higher in the intervention cohort (91.1%) compared to the historical cohort (83.1%) (p=0.012).
- In the cesarean birth group, survival rates were higher in the intervention cohort (89.1%) compared to the historical cohort (76.1%) (p=0.02).
- Survival rates by cardiac classification were higher in intervention cohorts for both category 1 and 2.

Conclusion

- These findings highlight the potential of SCAMP to optimize outcomes in pregnancies affected by fetal CHD.

A standardized clinical assessment and management plan (SCAMP) **improved neonatal survival at discharge** and **reduced practice variation** in managing pregnancies complicated by congenital heart disease.

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	Historical (n=167)	Intervention (n=247)	P value
Maternal Age (years)	**30.7**	**32.3**	**0.01**
Gravida (Median)	2	2	0.90
Parity (Median)	1	1	0.90
Neonatal birth wight (g)	2808	2967	0.02
Survival at discharge n(%)	**147(83.1)**	**225(91.1)**	**0.01**
Survival at discharge - spontaneous birth n,total(%)	40/45 (88.8)	81/90 (90.0)	0.81
Survival at discharge - Caesarean Birth n,total(%)	**46/60 (76.6)**	**90/101 (89.1)**	0.02
Length of stay (days)	45	33	0.08
Survived by Cardiac Classification			
Category 1	56(83.6%)	42(95.4%)	0.057
Category 2	**49(79.1%)**	**103(93.6%)**	**0.004**
Category 3	18(94.7%)	29(82.8%)	0.2
Category 4	16(88.8%)	16(72.7%)	0.2
Unknown/Other	1(100%)	5(100%)	0.1